

in size, and if an area of the single surface opening is converted into an area of a circle, a diameter of such circle does not exceed .05 mm.

REMARKS

Claim 10 is pending and claim 10 has been amended. Claim 10 does not contain new matter and is fully supported by the disclosure in the Specification at page 9-12, the originally filed Claims, and the Drawings.

Claim 10 was rejected under 35 U.S.C. § 102(b) as being anticipated by JP 10-008101 to Matsukawa et al ("Matsukawa"). The Examiner argues that Matsukawa teaches a method for producing a sintered oil-retaining bearing having a porous body that is equivalent to the method disclosed in claim 10. The Examiner contends that the method disclosed in the Matsukawa reference includes a metal powder charged into a forming die, relative motion between the forming die and a forming core rod, and compacted metal powder using the forming die and forming core rod.

The Matsukawa abstract appears to disclose a method for producing sintered oil-containing bearing. A powder is first filled into a gap between a die 24, having a recessed part in the inner surface and a core rod having a step part with both a small and large diameter part. The powder is compacted, forming a green compact having a bearing part 24 at one end and a projecting part 32 on the outer surface. The core rod is then shifted axially and the small diameter part is extended over the whole length of an inner hole of the green compact. The green compact is then converged so as to form one more bearing part 26 at the other end of the green compact.

Claim 10 is directed to a method of producing a sintered oil containing bearing by imparting a relative motion between a forming core rod and a metal powder which is to be cylindrically compacted, after the metal powder has been charged into the forming die.

The method claimed in claim 10 involves a relative motion between a core rod and a metal powder. The metal powder is charged into the cavity of a die and then there. The upper punch is pressed downward in the die, compacting the metal powder to form the bearing body. Subsequently, the die is lowered to a lower punch as the upper punch is raised. Lastly, the core rod is lowered to the lower punch and die to allow removal of the bearing body. See Specification, page 15, paragraph 1 to page 16, paragraph 1 and Figure 4.

In use, the bearing body is impregnated with lubricating agent, which seeps out of a bearing surface as a function of the temperature and pressure to form a oil film to support the rotary shaft. To prevent a local pressure decrease, no surface opening in the bearing surface of the bearing body is greater than or equal to .05 mm See the Specification, page 9, paragraph 1 to page 12, paragraph 1 and Figure 2.

Applicant respectfully traverses the Examiner's rejection. Examiner has not shown that the Matsukawa reference teaches every element claimed in amended claim 10. The Matsukawa abstract does not disclose the product produced by the claimed method as having surface openings formed on a bearing surface that are substantially uniform in size, and if an area of the single surface opening is converted into an area of a circle, a diameter of such circle does not exceed .05 mm as claimed in claim 10. The

Matsukawa reference does not teach or suggest the invention claimed in claim 10. Therefore, the Matsukawa reference cannot, by definition, anticipate claim 10 and the Examiner's rejection is without merit.

Claim 10 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over JP 11-037156 to Komori et al ("Komori") in view of JP 09-143506 to Mitsubishi Materials ("Mitsubishi"). The Examiner argues that Komori discloses a method for producing a sintered oil retaining bearing having a porous, cylindrical body. The Examiner argues that the method disclosed in Komori teaches charging metal powder into a forming die and compacting metal powder using a forming die and a forming core rod. The Examiner relies on Mitsubishi to provide the remaining element, which is the relative motion between the forming die and a forming core rod after the powder has been charged in the forming die. The Examiner argues that combining Komori and Mitsubishi would be obvious to one having ordinary skill in the art at the time of the invention.

The abstract of the Komori reference appears to disclose a method to manufacture an oil-containing porous bearing. A pair of forming parts 20 are separately made up on an outer circumferential surface of a core rod 12. A porous body is fed to the core rod 12, where it is pressed in a die and pressure is applied to a part to be opposed to both of the forming parts 20 of the a porous body 11. An inner diametral surface is formed into a smaller diameter than an area in the interval, while this inner diametral surface is pressed to the forming parts 20 of the core rod 12. Grooves are formed in the inner diametral surfaces to conform to the forming parts 20.

The abstract of the Mitsubishi reference appears to disclose a method to

manufacture a sintering component. An annular recess formed between a die 1, lower punch 5, and a core rod 3, is filled with material powder. The die 1 and the core rod 3 are rotated, and the powder flows compactly in the annular space.

The Applicant respectfully traverses the Examiner's obviousness rejection. The Examiner incorrectly applies the rejection. The Komori and Mitsubishi references even when combined do not teach or suggest each element of the claimed invention. The references fail to teach the limitation in claim 10 of the sintered oil retaining bearing produced in the claimed method having uniform surface openings formed on a bearing surface with a size no greater than .05 mm in diameter. The Komori and Mitsubishi references do not teach the product produced by the method in claim 10, and thus, the references can not make obvious the invention in claim 10.

Claim 10 was also rejected under 35 U.S.C. § 103(a) as being unpatentable over Komori in view of JP 08-174292 to Fuji Oozx KK ("Fuji"). The Examiner again argues that Komori discloses a method for producing a sintered oil retaining bearing having a porous, cylindrical body. The Examiner argues that the method disclosed in Komori teaches charging metal powder into a forming die and compacting metal powder using a forming die and a forming core rod. The Examiner contends that it is obvious to combine Komori and Fuji, and thus relies on Fuji to provide a missing element, which is the relative motion of the core rod and die.

The abstract of the Fuji reference seems to disclose a method for manufacturing sintered iron components. The method involves setting up a bottom punch 4 in a die 3 with a core rod 6 positioned in a bottom hole 4a of the bottom punch. Powder is evenly

filled in the die cavity 7. The core rod is then raised up so as to fix an upper edge 6a in an upper hole 5a of an upper punch 5. The core rod 6 has a diameter equal to that of the hole to be formed in the green compact.

Applicant respectfully traverses the Examiner's obviousness rejection. The combination of Komori and Fuji does not teach or suggest every element of amended claim 10. Specifically, the references do not teach the sintered oil retaining bearing produced in the claimed method having surface openings formed on a bearing surface that are substantially uniform in size, and if an area of the single surface opening is converted into an area of a circle, a diameter of such circle does not exceed .05 mm as in claim 10. Thus, the Examiner's rejection appears to be without merit.

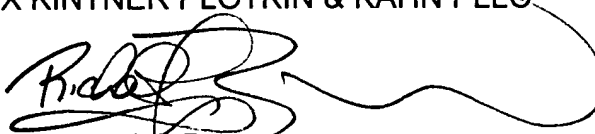
Accordingly, certain clear differences exist between the present invention as claimed and the prior art relied upon by the Examiner. It is submitted that these differences are more than sufficient that the present invention as claimed was not anticipated or rendered obvious in view of that art.

In view of the foregoing, reconsideration of the application, withdrawal of the outstanding rejections, allowance of Claim 10, and the prompt issuance of a Notice of Allowability are respectfully solicited.

Should the Examiner believe anything further is desirable in order to place this application in better condition for allowance, the Examiner is requested to contact the undersigned at the telephone number listed below.

In the event this paper is not considered to be timely filed, the Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension, together with any additional fees that may be due with respect to this paper, may be charged to counsel's Deposit Account No. 01-2300, referencing docket number 100725-00068.

Respectfully submitted,
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RJB:RN/ccd

PROPOSED AMENDED CLAIMS
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10. A method of producing a sintered oil retaining bearing having a cylindrical bearing body composed of a porous body formed of a sintered metal, said method being characterized in that when a metal powder is to be cylindrically compacted using a forming die and a forming core rod, a relative motion is imparted between the forming core rod and the metal powder after the metal powder has been charged into the forming die[.], wherein the sintered oil retaining bearing produced in said method has surface openings formed on a bearing surface that are substantially uniform in size, and if an area of the single surface opening is converted into an area of a circle, a diameter of such circle does not exceed .05 mm.